

WHAT IS CLAIMED IS:

1. An integrated active rectifier module comprising;  
a base plate;  
a plurality of substrates attached to said base plate;  
power elements for an active rectifier mounted on one of said substrate;  
elements for a voltage regulator mounted on another one of said substrates; and  
elements for driving said power elements mounted on another one of said substrates.  
  
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2. An integrated active rectifier module according to claim 1 further comprising, a first lead frame, and a first lead frame support, said lead frame being supported on said first lead frame support over said plurality of substrates.
3. An integrated active rectifier module according to claim 2, wherein said lead frame support is attached to said base plate.
4. An integrated active rectifier module according to claim 2, wherein said lead frame support surrounds said plurality of substrate.
5. An integrated active rectifier module according to claim 1, further comprising a second lead frame, and a second lead frame support, said second lead frame being supported above said first lead frame by said second lead frame support.
6. An integrated active rectifier module according to claim 5, wherein said first lead frame is used to connect a phase of a stator to said active rectifier and said second lead frame serves as an output lead frame for said active rectifier.

7. An integrated active rectifier module according to claim 1, wherein said substrates are attached to said base plate by a flexible adhesive.
8. An integrated active rectifier module according to claim 1, further comprising a heatsink in thermal contact with said base plate.
9. An integrated active rectifier module according to claim 1, further comprising a conductive block on at least one of said substrates, said conductive block extending above said substrate.